"PATENT"

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.	:	10/730,525	Confirmation No. 4271
Applicant	:	Agapios Agapiou, et al.	
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Commissioner for Patents
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DECLARATION UNDER 37 CFR § 1.132

Sir:

I, Agapios Agapiou declare as follows:

I am a co-inventor of the subject matter claimed and described in the above-identified patent application. The purpose of this Declaration is to demonstrate that the claim 1, as is currently amended to include the feature "wherein the support material has an average particle size in the range of from 15 to 40 μm" presents an unexpected improvement over the prior art cited by the Examiner.

First, with respect to the data in the instant Application, I am confident that the data presented demonstrates and discloses the advantage of the present invention. In particular, the working examples, as summarized in the Figures, do demonstrate that at the claimed range of methalumoxane and the claimed range of metallocene that there is less fouling of the reactor during polymerization. Also, further to the invention, the

decreased fouling does not come at the expense of high catalyst activity. The data attached demonstrate this feature.

Under my direction and control, or under the direction and control of those working in cooperation with me, other experiments were conducted to show that, all other things being equal with the catalyst composition, the average particle size (APS) of the support material, in this case silica, does have an unexpected benefit in increasing the catalyst activity. This data is shown attached.

The catalyst was made otherwise as in "Example 1", outlined at paragraph [0105] of the specification as filed. The polymerization was carried out also as described in the specification at paragraph [0103].

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 or Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-referenced application or any patent issuing thereon.

Respectfully submitted,

December 8, 2005
Date

Agapios Agapiou

Effect of silica particle size

metallocene	Silica Type	Zr wt%	AS-990	Activity	Resin BD	MI/MIR	Density
Bis(1,3-methyl-butylcyclopentadienyl) zirconium dichloride	(1)	0.4	Y	2910	0.447	0.21/17.1	0.9143
same	(1)	0.4	Y	3630	0.422	0.19/18.5	0.9155
same	(2)	0.4	Y	4680	0.432	0.17/17.8	0.9142
same	(3)	0.4	Y	4673	0.424	0.20/16.8	0.9149

(1) Davison 948 silica, Average Particle Size (APS) of 50 micron.

(2) ES-757 Ineos (Crosfield) silica, 25 micron APS.

(3) Experimental silica, 30 micron APS

Note: Activity = gPE/gCat.h, Resin BD=g/cc, MI=dg/min, Density=g/cc